

## CLAIMS

1. A bouncing apparatus, comprising:

a carriage assembly that can support a user, the carriage assembly having an exterior shell defining an interior chamber;

a foot being operable to extend away from and retract toward the carriage assembly;

a piston connecting the foot and the carriage assembly, the piston effecting extension and resisting retraction of the foot, and at least a portion of the piston being within the interior chamber;

a plurality of tension elements in operative contact with the piston and being at least partly contained within the interior chamber, at least some of the plurality of tension elements being mountable in an operative state and demountable in an inoperative state with respect to the piston; and

a connector attached to a first end of first one of the plurality of tension elements and being operable to adjust a tension of the first tension element.

2. The bouncing apparatus of claim 1, further comprising:

a first mount connected to a first portion of the interior chamber; and

a second mount connected to a second portion of the interior chamber;

wherein, when the first tension element is in the inoperative state, the first end of the first tension element is mounted to the first mount by the connector, and a second end of the first tension element is demounted from the second mount.

3. The bouncing apparatus of claim 1, further comprising:

a first mount connected to a first portion of the interior chamber;

wherein the connector includes a variable adjustment means for adjusting the tension of the first tension element.

4. The bouncing apparatus of claim 1, further comprising:

a first mount connected to a first portion of the interior chamber;

wherein the connector includes a plurality of extensions and grooves adjacent to the extensions, and the tension of the first tension element is adjustable by raising or lowering the connector so that a selected one of the extensions contacts the first mount.

5. The bouncing apparatus of claim 4, wherein the extensions are spaced so that slack is taken up in increments of less than about 1/4 inch.

6. The bouncing apparatus of claim 4, wherein the extensions and grooves provide between 2 and 10 levels of adjustment.

7. The bouncing apparatus of claim 1, wherein the connector is operable to take up slack to compensate for up to a 10% elongation of the first tension element.

8. A bouncing apparatus, comprising:

a carriage assembly that can support a user, the carriage assembly having an exterior shell defining an interior chamber;

a foot being operable to extend away from and retract toward the carriage assembly;

a piston connecting the foot and the carriage assembly, the piston effecting extension and resisting retraction of the foot, and at least a portion of the piston being within the interior chamber;

a plurality of tension elements in operative contact with the piston and being at least partly contained within the interior chamber, at least some of the plurality of tension elements being mountable in an operative state and demountable in an inoperative state with respect to the piston;

a first mount connected to the interior chamber;  
and

a connector having a collar fixedly attached around a pre-stressed collar region of a first one of the plurality of tension elements, the connector being operable to connect the first tension element to the first mount.

9. The bouncing apparatus of claim 8, wherein the collar region is pre-stressed past a working elongation.

10. The bouncing apparatus of claim 8, wherein the collar region is pre-stressed to an elongation of between 300% and 500%.

11. The bouncing apparatus of claim 8, wherein the connector further includes a hanger attached to the collar, the hanger being mountable to the first mount.

12. The bouncing apparatus of claim 11, wherein one of the collar and the hanger has a protrusion and the other one of the collar and the hanger has a recess for receiving the protrusion, and the collar and the hanger are connected together by the protrusion mounted in the recess.

13. The bouncing apparatus of claim 8, wherein the collar includes a pair of collar segments.

14. The bouncing apparatus of claim 13, wherein the collar segments are connected to each other by a fixation means.

15. The bouncing apparatus of claim 14, wherein the fixation means comprises reciprocal mating features.

16. The bouncing apparatus of claim 8, wherein the plurality of tension elements are comprised of rubber.

17. The bouncing apparatus of claim 16, wherein the rubber is an unfilled natural rubber.

18. The bouncing apparatus of claim 16, wherein the rubber is a synthetic polyisoprene.

19. A method, comprising:

providing an elastomeric tension element, the elastomeric tension element having a collar region;

pre-stressing the collar region of the elastomeric tension element; and

fixedly attaching a collar to the collar region.

20. The method of claim 19, wherein the collar region is pre-stressed beyond a working elongation.

21. The method of claim 19, wherein the collar region is pre-stressed to an elongation of between 300% and 500%.

22. The method of claim 19, further comprising connecting a hanger to the collar, wherein the hanger is connectable to a mount of a bouncing apparatus.

23. The method of claim 19, wherein the collar includes a pair of collar portions, and fixedly attaching the collar includes mating the pair of collar portions together around the collar region.

24. A bouncing apparatus, comprising:

a carriage assembly that can support a user, the carriage assembly having an exterior shell defining an interior chamber;

a foot being operable to extend away from and retract toward the carriage assembly;

a piston connecting the foot and the carriage assembly, the piston effecting extension and resisting retraction of the foot, and at least a portion of the piston being within the interior chamber;

a plurality of tension elements in operative contact with the piston and being at least partly contained within the interior chamber, at least some of the plurality

of tension elements being mountable in an operative state and demountable in an inoperative state with respect to the piston; and

a holster operable to contain demounted ones of the plurality of tension elements.

25. The bouncing apparatus of claim 24, wherein the demounted tension elements are untensioned.

26. The bouncing apparatus of claim 24, wherein the holster includes one or more walls for containing the demounted tension elements.

27. The bouncing apparatus of claim 24, wherein the holster comprises a rear wall, a plurality of sidewalls extending from the rear wall, and front members connected to at least some of the sidewalls.

28. The bouncing apparatus of claim 27, wherein at least some of the front members are T-shaped.

29. The bouncing apparatus of claim 27, wherein at least some of the front members are curved.

30. The bouncing apparatus of claim 27, wherein at least some of the front members are arched.

31. The bouncing apparatus of claim 27, wherein a selected one of the demounted tension elements is contained by a portion of the rear wall, a pair of the sidewalls, and a first one of the front members.

32. The bouncing apparatus of claim 24, wherein there is a clearance of 0.01 to 0.1 inches between a selected one of the demounted tension elements and the holster.

33. The bouncing apparatus of claim 24, wherein there is a clearance of at least about 0.04 inches between a selected one of the demounted tension elements and the holster.

34. The bouncing apparatus of claim 24, wherein the holster is dimensioned so that it does not cause friction with the tension elements mounted in the operative state.